

rapidscale
A COX BUSINESS COMPANY

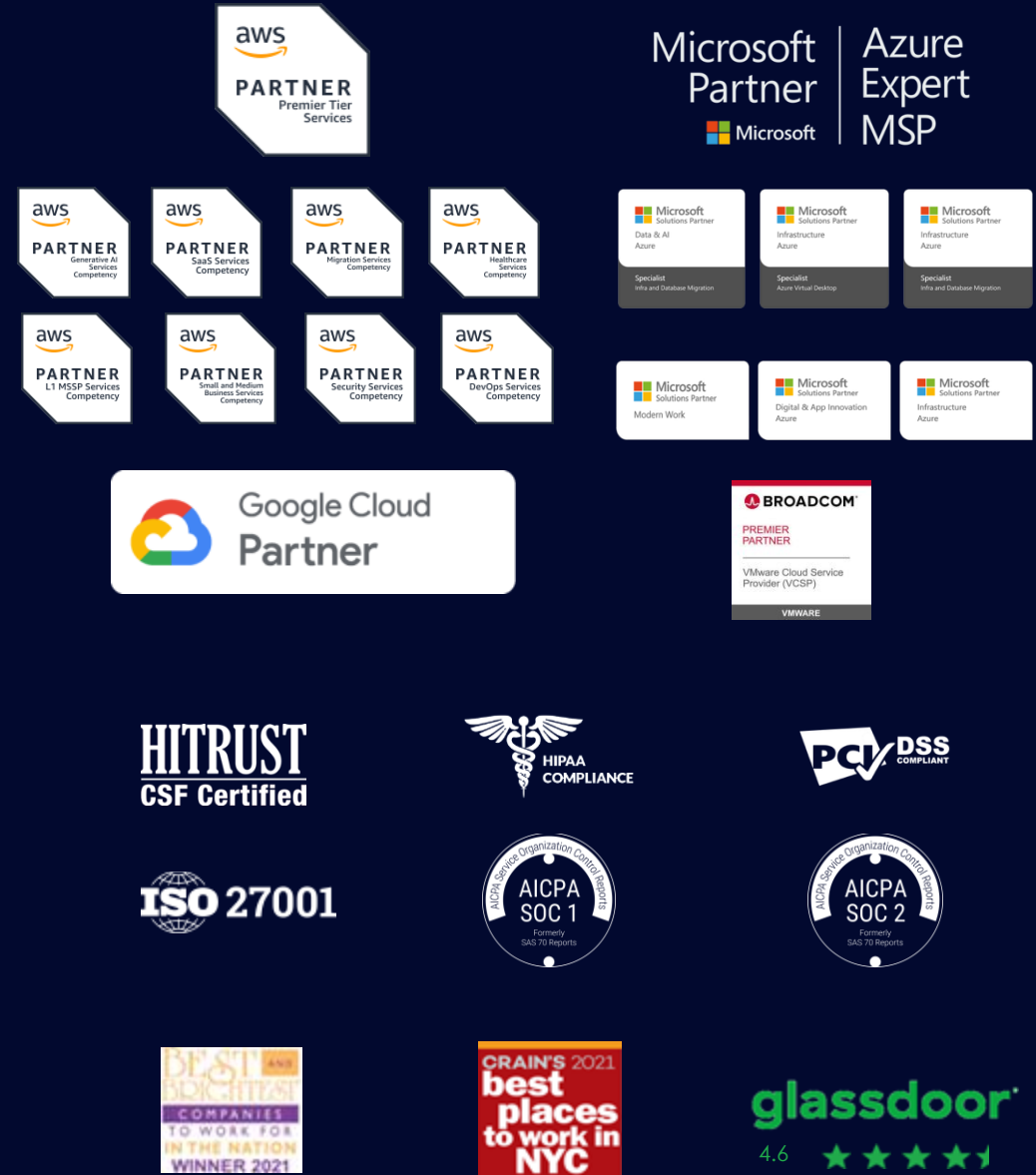


Cloud FinOps Services

Visibility, Optimization, and Governance

Who we are

- AWS Premier MSP, Healthcare, Migration, DevOps, Marketing, Security, and SaaS Specializations
- Our team is FinOps Foundations Certified Practitioners
- HIPAA, HITRUST CSF, ISO 27001, SOC1, SOC2, PCI-DSS Certified
- Azure Expert MSP with Multiple Advanced competencies
- Leader in Gartner MQ for Public Cloud
- Infrastructure Professional and Managed Services
- Strong Company Culture - Consistently Named Best Place to Work; Average Employee Tenure 4+ Years



82%

OF COMPANIES STRUGGLE WITH CLOUD SPEND

Source: Flexera State of Cloud 2023

60%

OF COMPANIES
CAN'T LINK SPEND
TO BU/TEAM

53%

OF COMPANIES
ARE NOT SEEING
CLOUD ROI

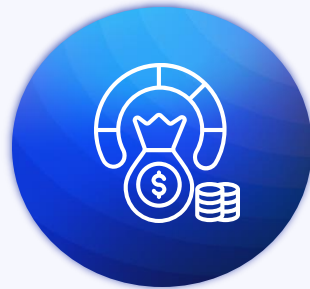
Your Company's Goals

3 Pillars of Cloud Cost Management



Visibility

Reporting and analysis to support informed decisions



Optimization

Follow best practices to refine and optimize your estate



Governance

Employ guardrails to ensure continued optimization

Overview

Our Cost Management Service



“Gain control over your cloud usage with tooling, expert guidance, and reporting. “



Visibility

Cloud Cost Tooling

Access the industry-leading cloud management tool, CloudHealth, and custom dashboards targeted to business and applications.



Optimization

Expert FinOps Guidance

Our Cloud Analysts offer personal, proactive recommendations for cost savings.



Governance

Monitoring and Anomaly Detection –

In addition to dashboards and monthly reports, get notified of unusual activity to prevent accidental spend.

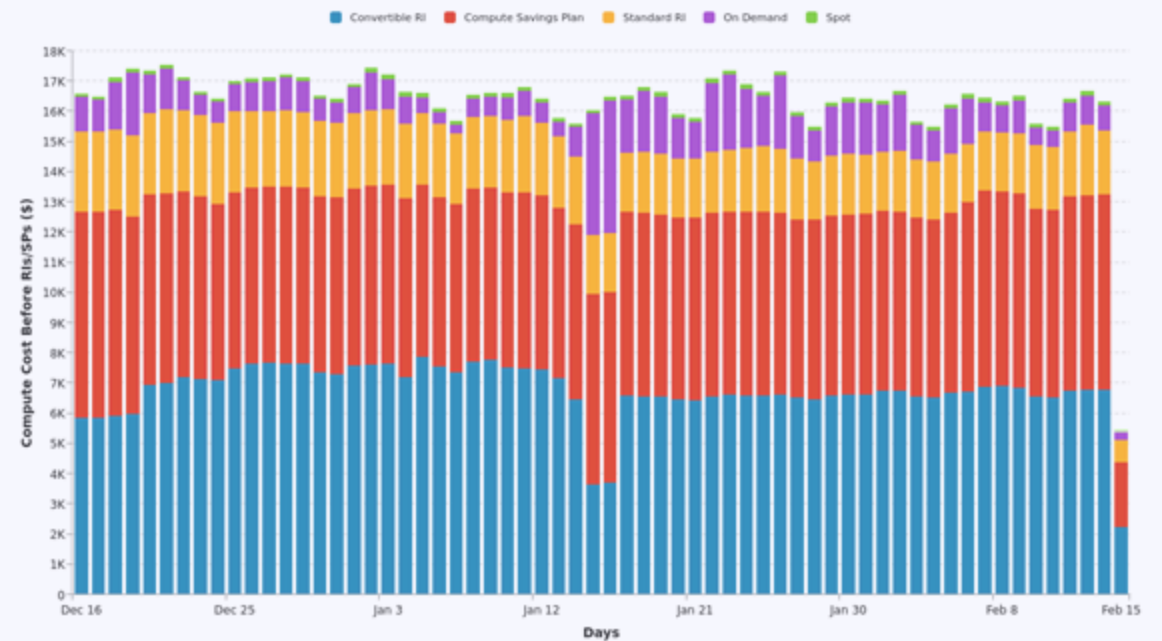


Visibility

Pillar 1 of Cost Management

HOW WE HELP

- Allocate costs to specific applications, teams, and accounts
- Pinpoint and break down costs in a way that's meaningful to your business
- Track chargeback/showback
Access custom cost dashboards and reports





Optimization

Pillar 2 of Cost Management


HOW WE HELP

- > Tailored recommendations based on your use case and products
- > Recommendations around commitment-based discounts (RIs)
- > Monthly recommendations report highlights opportunities for optimization
- > (Optional) Access to RapidScale Solutions Architects for advanced architectural review

Rightsizing

EC2 RDS Kubernetes OpenSearch **BETA**

FILTERS Efficiency Target: Average Metrics Date Range: Last 30 Days Recommend Burstables Group by: None **UPDATE** **RESET**

Current Recommendations  6284 ● Resize 6281 ● Terminate 3	Current Monthly Price ⓘ \$2,431,118.82	Projected Monthly Price ⓘ \$1,973,521.82	Projected Monthly Savings ⓘ \$457,597.00
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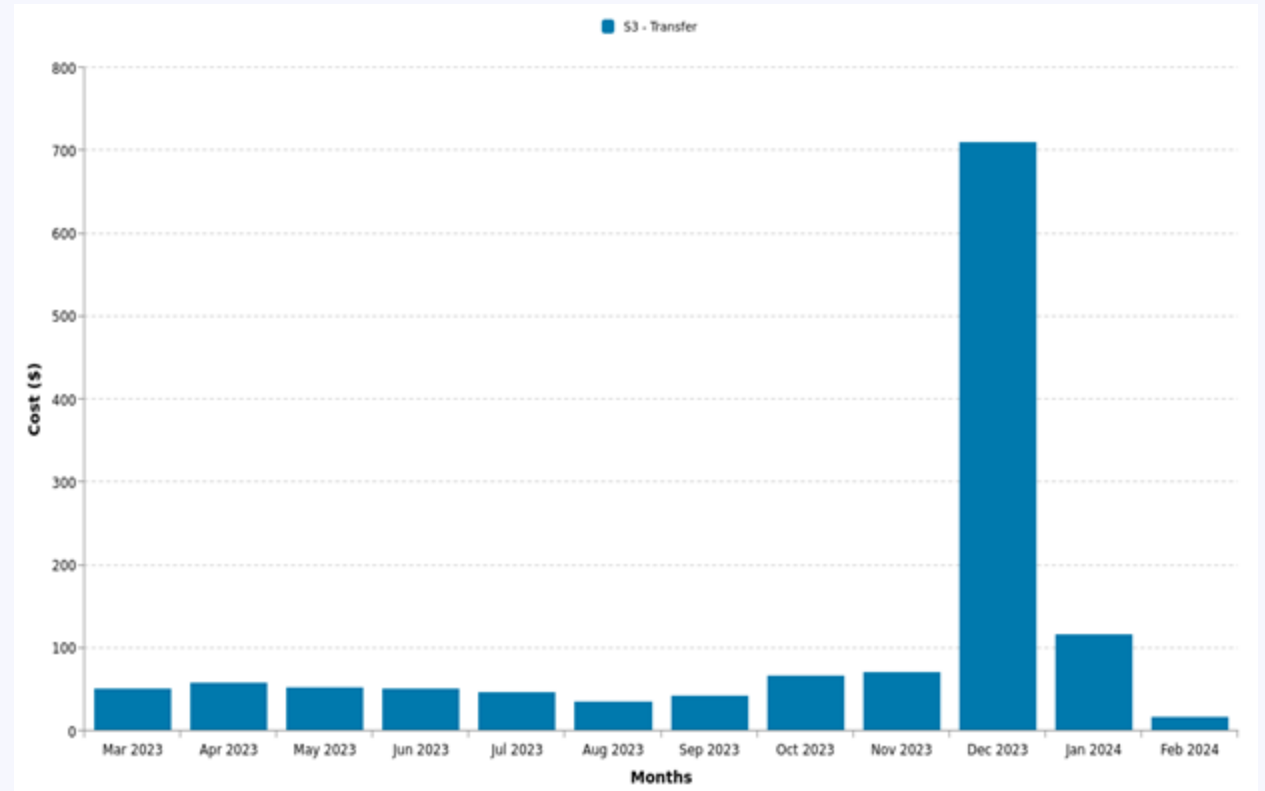


Governance

Pillar 3 of Cost Management

HOW WE HELP

- Identify cost anomalies before they become huge financial issues
- Establish custom CloudHealth alerts tailored to each application
- Plan for seasonality and testing
- Get monthly review of costs with our FinOps team and your Service Delivery Manager



What Success Looks Like



Visibility

Largest SaaS Company for Libraries

- > Customer since 2018 with \$4MM+ in cloud spend per year that leverages RapidScale Managed Services
- > We identified quick wins to reduce ancillary cloud costs (i.e. monitoring), and within 2 weeks, achieved 64% reduction in ancillary costs



Optimization

Government SaaS Company

- > Company experienced 3X growth in 12 months, and AWS costs grew linearly, putting pressure on IT to reduce Average Spend Per Customer
- > RapidScale helped customer modernize application + OS, fix storage classes, and purchase Ris to reduce ASPC by 40%



Governance

Retail

- > Implemented ML workflow to enable customer to proactively monitor for spend anomalies based on historical usage.
- > This system caught and helped prevent an overage from a runaway autoscaling cluster that would have caused a six-figure bill after 48 hours.

Designated Cloud FinOps Team



Service Delivery Manager

Your main point of contact at RapidScale, responsible for coordinating RapidScale engineers and quarterbacking tickets.

Cloud FinOps Specialists

Cloud financial experts with an average 10 years of experience in managing cloud costs. Will be responsible for monthly reports and responding to your tickets.

Access to Cloud Engineers + Architects

Specialized team of Azure, AWS, DevOps, Security, Database, and Network Engineers ready to implement recommendations or custom projects.

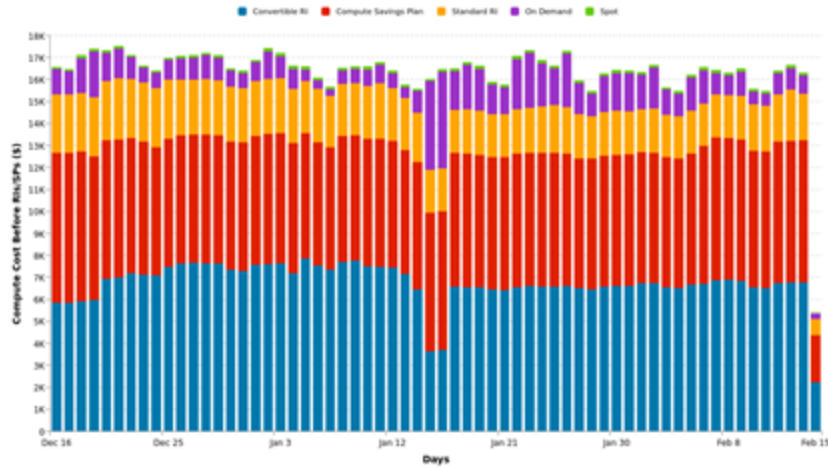
- 100% RapidScale employees and US-based teams
- Positive, collaborative culture to solve issues
- Well-documented and automated escalation procedures
- \$50M+ in cloud spend under management

Sample Reports and Dashboards



Visibility Examples

Custom Reporting

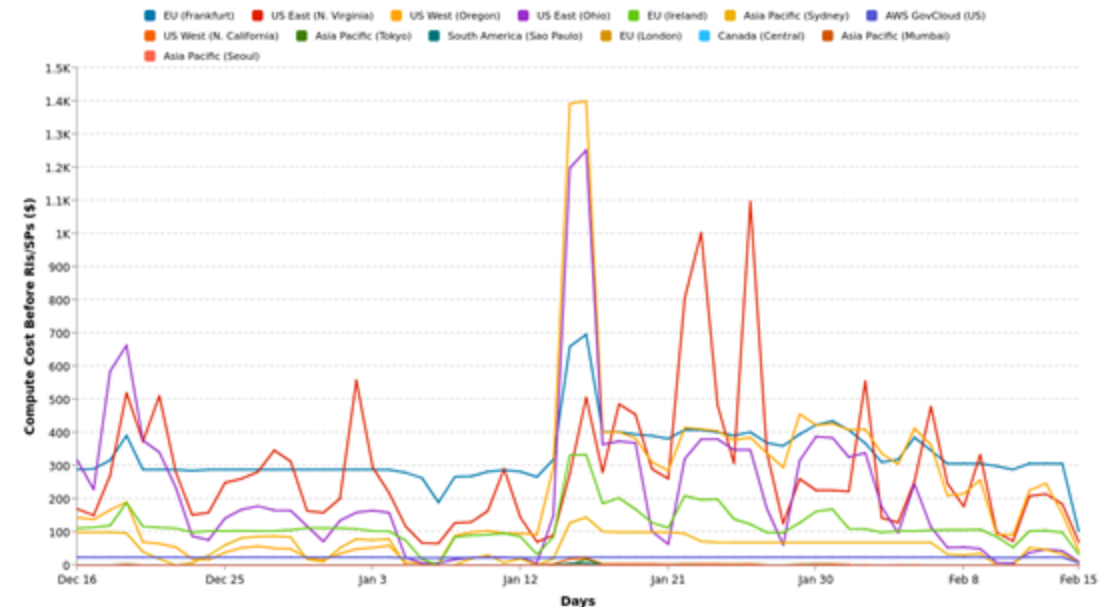


Our FinOps team works directly with you to understand your cost reporting needs. These preliminary discussions help us to pinpoint and breakdown costs in a way that is meaningful to you.

In some cases, we may even architect an environment (e.g., Control Tower) to create an account for your individual clients so that all of the associated costs are tracked separately and are easy to understand.

Spend Visibility refers to cloud reporting and building a foundational understanding of your cloud bill. RapidScale uses CloudHealth reporting to give you the details you need to make informed business decisions about your cloud resources.

While your cloud bill may give you some basic usage information, such as compute or storage costs, RapidScale can build custom reports in CloudHealth to show you how much individual clients, specific projects or applications, departments, and accounts contribute to your costs.



Visibility Examples

Custom Dashboards

23,032,596.4

Storage (GB)

32,917

Buckets

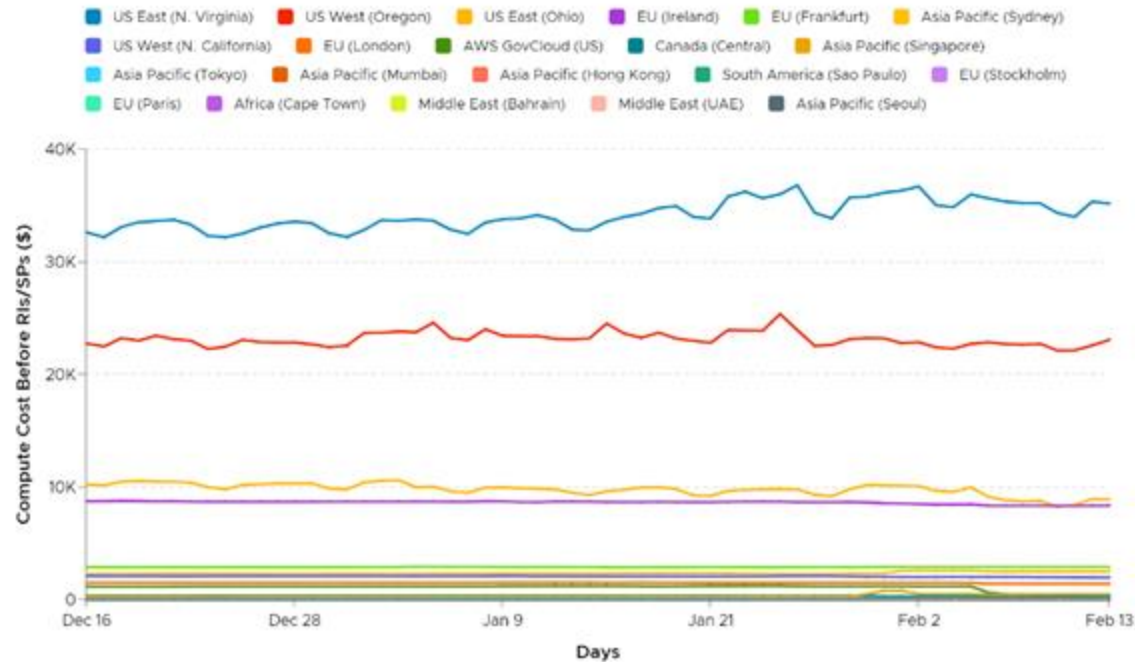
1,863,660,345

API Requests

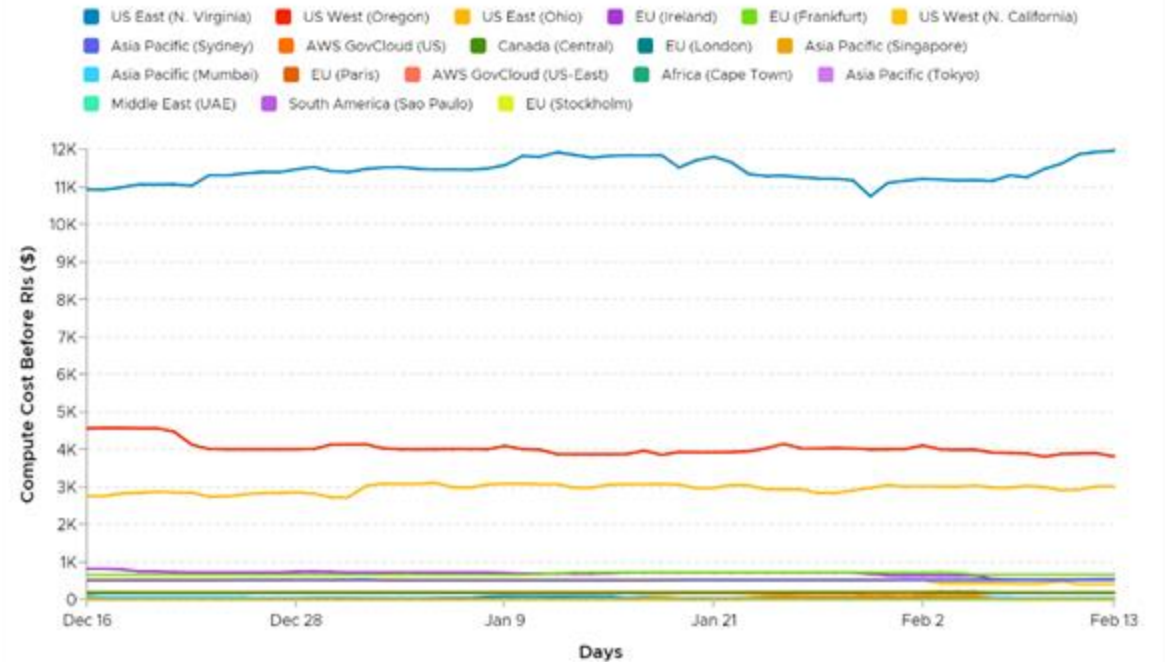
2,907.96

Data Transfer Out

Instance Costs by Days and Regions



RDS Cost by Days and Regions



Visibility Examples

Flex Reports

New Report

2/28/2024-6:02 AM ⓘ

Report Configuration

Report name: Datasource:

Description:

Aggregated by: Range:

MEASURES ⓘ

[+ ADD MEASURES](#)

DIMENSIONS ⓘ

[+ ADD DIMENSIONS](#)

FILTERS

Report Query

Chart preview

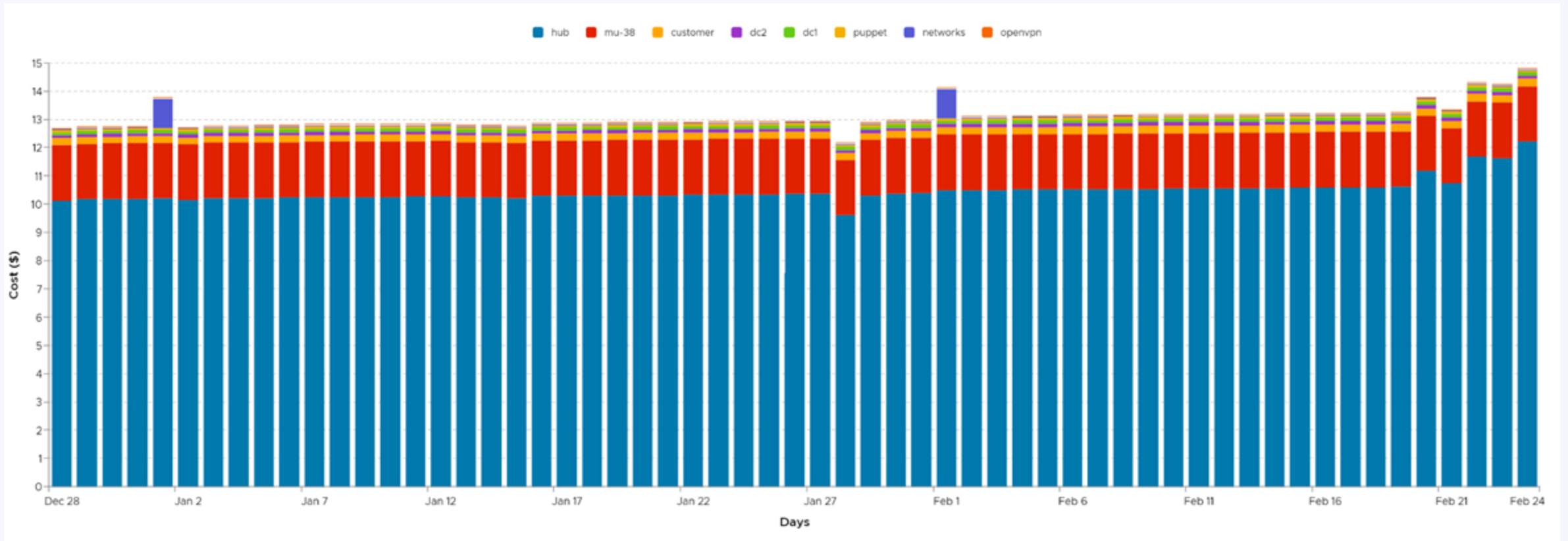
Report Preview

This preview contains up to 1000 rows of the report. The saved report will contain a total of 207377 rows.

Month	SUM linitem UnblendedCost	Identity Linitemid	Linitem LinitemDescription	Linitem LinitemType	Linitem ProductCode	Linitem Resourceid	Linitem UsageAccountid	Linitem UsageType
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Visibility Examples

Perspectives Costs by "Env" Tag

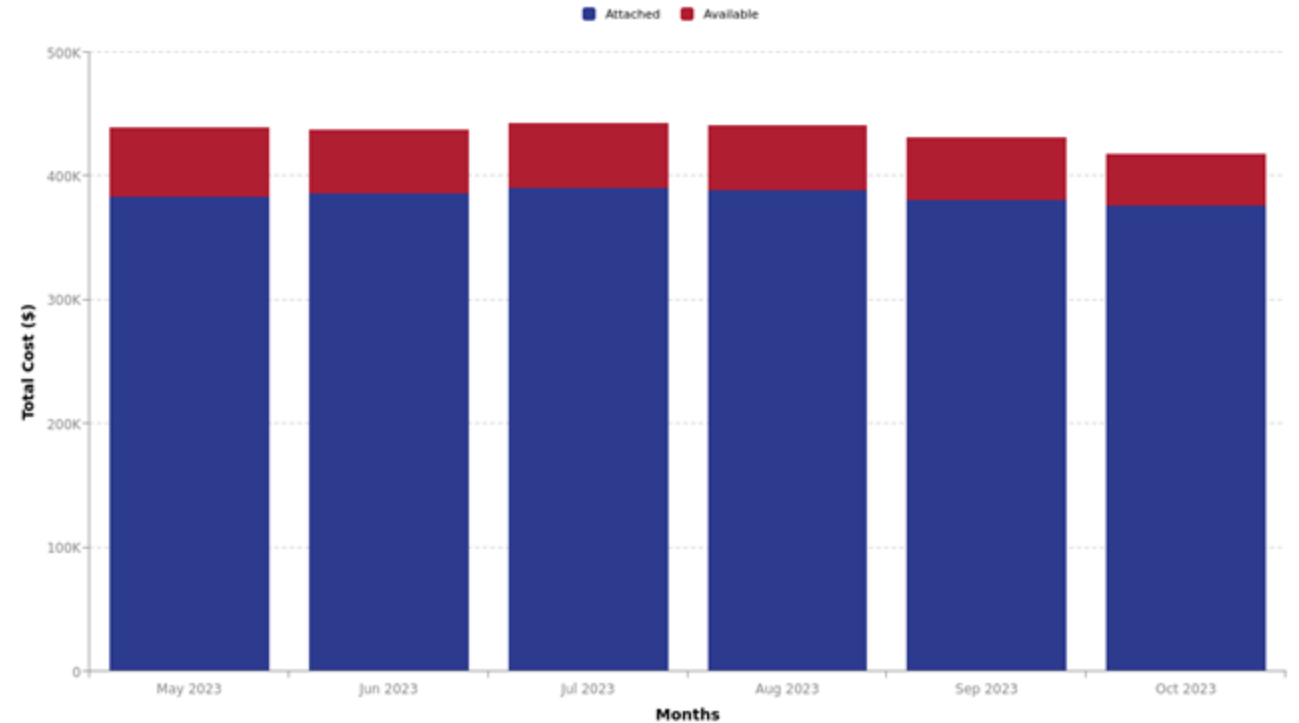


Spend Optimization

Orphaned and Underutilized Services

POTENTIAL INITIATIVES:

- > Compute Optimization
- > Unattached Storage Volumes
- > Storage Lifecycle Policy Analysis



Compute Rightsizing Recommendations

RIGHTSIZING CONSIDERATIONS:

- > Using Average CPU/Memory/Disk metrics alone may not reflect spikes in consumption that should be reviewed in CloudHealth prior to Rightsizing.
- > Rightsize prior to employing Rate Savings discounts to avoid over-provisioned Commitment Based Discounts.
- > Spend figures and projected monthly savings figures are based on instances running 24/7.

Rightsizing

EC2 RDS Kubernetes OpenSearch BETA

FILTERS

Efficiency Target

Average Metrics

Date Range

Last 30 Days

Recommend Burstables

Group by

None

UPDATE

RESET

Current Recommendations



6284

- Resize 6281
- Terminate 3

Current Monthly Price

\$2,431,118.82

Projected Monthly Price

\$1,973,521.82

Projected Monthly Savings

\$457,597.00

Commitment Based Discounts

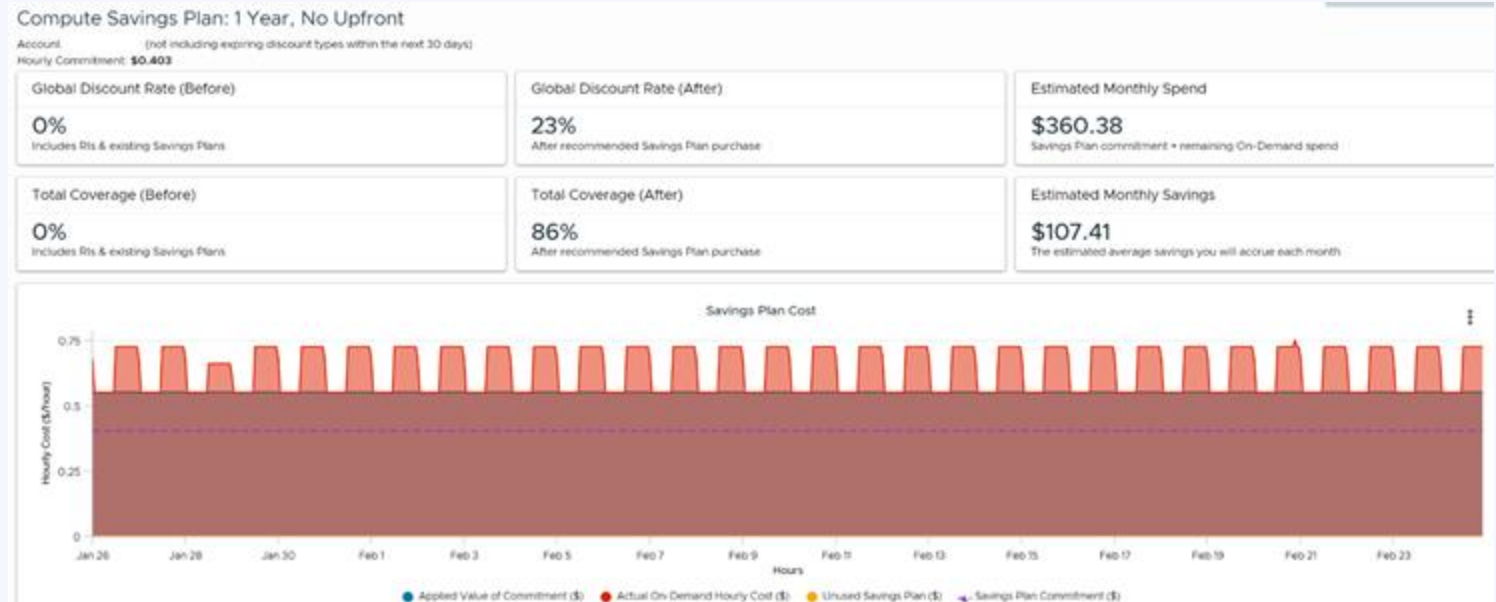
Plan Recommendations

COMPUTE RATE SAVINGS:

Prior Month SP/RI Coverage: 0%

Proposed Coverage:

- > Target Coverage: 86%
- > Potential Monthly Savings: \$107.41



Spend Governance

Cost Anomaly Analysis

Anomaly Details

Submit your feedback to improve the accuracy of detection.

Start Date: 1/8/2024

Cost Impact Type: Increase

Account ID

Marketplace: No

End Date: 1/8/2024

Cost Impact: \$14.83

Account Name

Feedback: Not Submitted

Duration: 1 day

Cost Impact Percentage: 1,066.91%

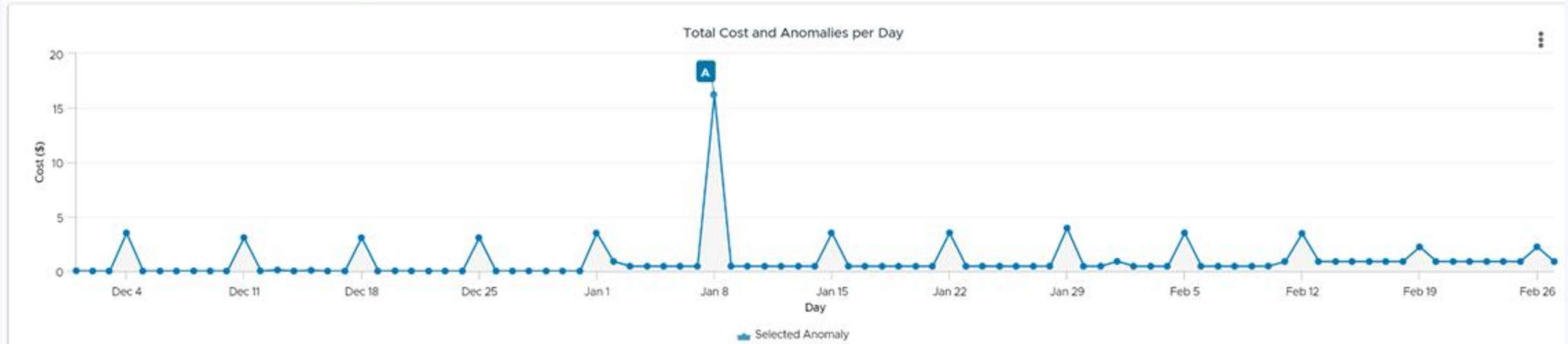
Service: AWSConfig

Status: Inactive

Total Cost: \$16.22

Region: us-east-2






Time Period: Last 90 days Show Other Anomalies



Governance - Automated Spend Policies

Policies

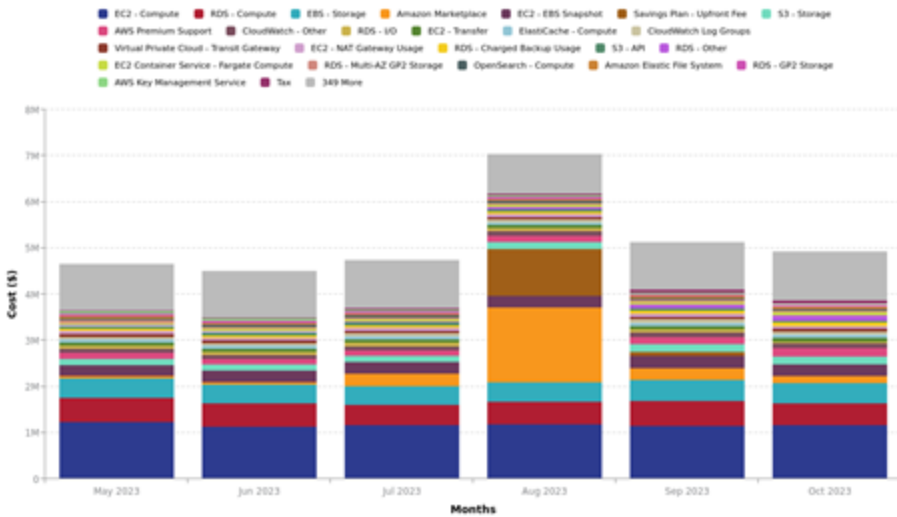
Q Search EDIT COLUMNS... 500 RESULTS PER PAGE DOWNLOAD

	Policy Name	Description
   	i CIS Azure Foundations	Center for Internet Security (CIS) security benchmark providing best practices securing Azure environments. This policy can be used to validate your adherence to important security recommendations.
   	Underutilized Instances	Alert when Instance Avg CPU is below threshold.
   	Unattached Volumes	Terminate unattached volumes.
   	Over Budget	Alert when over budget by user defined threshold.
   	EC2 Cost Increase 10%	Alert on increase to EC2 by 5% in 30 day period
   	i CIS AWS Foundations	Center for Internet Security (CIS) security benchmark providing best practices securing AWS environments. This policy can be used to validate your adherence to important security recommendations.
   	i AWS Best Practices Security	CloudHealth provided default policy that monitors for AWS security best practices.

Governance

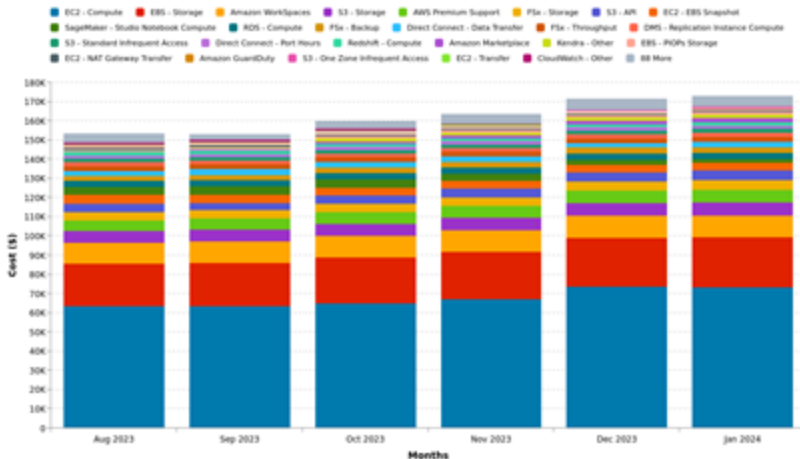
Monthly FinOps Cadence Calls

Service	11/2023	12/2023	01/2024	M2M Delta %
Total Cloud Spend	\$33,041	\$37,594	\$38,693	2.92% ↑
EC2 - Compute	16,996.56	18,656.26	19,236.14	3.11% ↑
RDS - Compute	1,335.45	1,908.36	467.10	29.28% ↓
EC2 - EBS Snapshot	5,017.94	5,120.50	5,443.78	6.31% ↑
EBS - Storage	4,352.18	4,054.35	4,128.51	1.83% ↑



Notable Spend Trends

Service	11/2023	12/2023	01/2024	Delta %
Total Cloud Spend	\$163,684	\$171,696	\$172,978	5.6% ↑
EC2 - Compute	66,964.45	73,578.32	73,469.45	9.7% ↑
Direct Connect - Data Transfer	2,842.31	2,178.83	2,880.34	32.20% ↑
FSx - Storage	4,264.00	4,681.97	5,328.96	13.82% ↑
Amazon Marketplace	1,330.52	1,710.75	2,316.80	35.43% ↑
OpenSearch - Other	0.00	0.00	418.56	100% ↑
S3 - Transfer	70.89	710.53	117.08	83.52% ↓



[Cost History Report](#)

Notable Spend Trends

Data Transfer Increases

Dec-2023

RecordType	ProductName	UsageType	Operation	ItemDescription	ResourceId	UsageStartDate	Cost
LineItem	AWS Direct Connect	USE1-CS32A-DataXfer-Out.dc.3	RunInstances	\$0.0200 per GB - AWS Direct Connect to AWS Private Cloud data transfer Outbound per GB US East (N. Virginia)	i-05a4e94d5a48f19b	2023-12-01 00:00:00	\$1,018.41
LineItem	AWS Direct Connect	USE1-CS32A-DataXfer-Out.dc.3	RunInstances	\$0.0200 per GB - AWS Direct Connect to AWS Private Cloud data transfer Outbound per GB US East (N. Virginia)	i-0246dab6885626faa	2023-12-01 00:00:00	\$359.65
LineItem	AWS Direct Connect	USE1-CS32A-DataXfer-Out.dc.3	RunInstances	\$0.0200 per GB - AWS Direct Connect to AWS Private Cloud data transfer Outbound per GB US East (N. Virginia)	i-08424bc799e18774b	2023-12-01 00:00:00	\$226.74
LineItem	AWS Direct Connect	USE1-CS32A-DataXfer-Out.dc.3	RunInstances	\$0.0200 per GB - AWS Direct Connect to AWS Private Cloud data transfer Outbound per GB US East (N. Virginia)	i-0075e919d113d1b0f	2023-12-01 00:00:00	\$166.26
LineItem	AWS Direct Connect	USE1-CS32A-DataXfer-Out.dc.3	RunInstances	\$0.0200 per GB - AWS Direct Connect to AWS Private Cloud data transfer Outbound per GB US East (N. Virginia)	i-09c3896d13040d158	2023-12-01 00:00:00	\$100.87
LineItem	AWS Direct Connect	USE1-CS32A-DataXfer-Out.dc.3	RunInstances	\$0.0200 per GB - AWS Direct Connect to AWS Private Cloud data transfer Outbound per GB US East (N. Virginia)	i-075869aa021606ea4	2023-12-01 00:00:00	\$63.96

Jan-2024

RecordType	ProductName	UsageType	Operation	ItemDescription	ResourceId	UsageStartDate	Cost
LineItem	AWS Direct Connect	USE1-CS32A-DataXfer-Out.dc.3	RunInstances	\$0.0200 per GB - AWS Direct Connect to AWS Private Cloud data transfer Outbound per GB US East (N. Virginia)	i-05a4e94d5a48f19b	2024-01-01 00:00:00	\$1,623.23
LineItem	AWS Direct Connect	USE1-CS32A-DataXfer-Out.dc.3	RunInstances	\$0.0200 per GB - AWS Direct Connect to AWS Private Cloud data transfer Outbound per GB US East (N. Virginia)	i-0246dab6885626faa	2024-01-01 00:00:00	\$399.77
LineItem	AWS Direct Connect	USE1-CS32A-DataXfer-Out.dc.3	RunInstances	\$0.0200 per GB - AWS Direct Connect to AWS Private Cloud data transfer Outbound per GB US East (N. Virginia)	i-08424bc799e18774b	2024-01-01 00:00:00	\$239.88
LineItem	AWS Direct Connect	USE1-CS32A-DataXfer-Out.dc.3	RunInstances	\$0.0200 per GB - AWS Direct Connect to AWS Private Cloud data transfer Outbound per GB US East (N. Virginia)	i-0075e919d113d1b0f	2024-01-01 00:00:00	\$176.09
LineItem	AWS Direct Connect	USE1-CS32A-DataXfer-Out.dc.3	RunInstances	\$0.0200 per GB - AWS Direct Connect to AWS Private Cloud data transfer Outbound per GB US East (N. Virginia)	i-09c3896d13040d158	2024-01-01 00:00:00	\$127.63
LineItem	AWS Direct Connect	USE1-CS32A-DataXfer-Out.dc.3	RunInstances	\$0.0200 per GB - AWS Direct Connect to AWS Private Cloud data transfer Outbound per GB US East (N. Virginia)	i-075869aa021606ea4	2024-01-01 00:00:00	\$65.81

Notable Spend Trends

FSx - Storage Increases

Dec-2023

RecordType	ProductName	UsageType	Operation	ItemDescription	ResourceId	UsageStartDate	Cost
LineItem	Amazon FSx	USE1-Storage	CreateFileSystem:Windows	\$0.130 per GB-Month of provisioned Windows File Server storage - US East (N. Virginia)	arn:aws:fsx:us-east-1:287515144351:file-system/fs-069c827974b82b8b0	2023-12-01 00:00:00	\$4,677.81
LineItem	Amazon FSx	USE1-Storage	CreateFileSystem:Windows	\$0.130 per GB-Month of provisioned Windows File Server storage - US East (N. Virginia)	arn:aws:fsx:us-east-1:287515144351:file-system/fs-029ed68f408766765	2023-12-01 00:00:00	\$4.16

Jan-2024

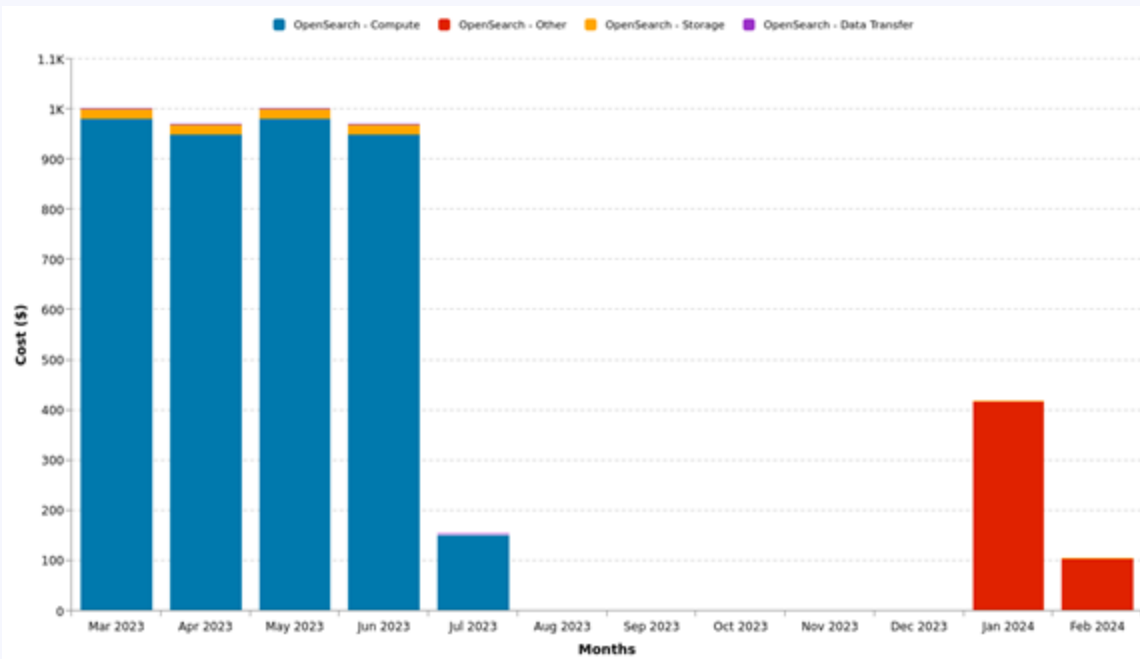
RecordType	ProductName	UsageType	Operation	ItemDescription	ResourceId	UsageStartDate	Cost
LineItem	Amazon FSx	USE1-Storage	CreateFileSystem:Windows	\$0.130 per GB-Month of provisioned Windows File Server storage - US East (N. Virginia)	arn:aws:fsx:us-east-1:287515144351:file-system/fs-069c827974b82b8b0	2024-01-01 00:00:00	\$5,324.80
LineItem	Amazon FSx	USE1-Storage	CreateFileSystem:Windows	\$0.130 per GB-Month of provisioned Windows File Server storage - US East (N. Virginia)	arn:aws:fsx:us-east-1:287515144351:file-system/fs-029ed68f408766765	2024-01-01 00:00:00	\$4.16

[Cost History Report](#)

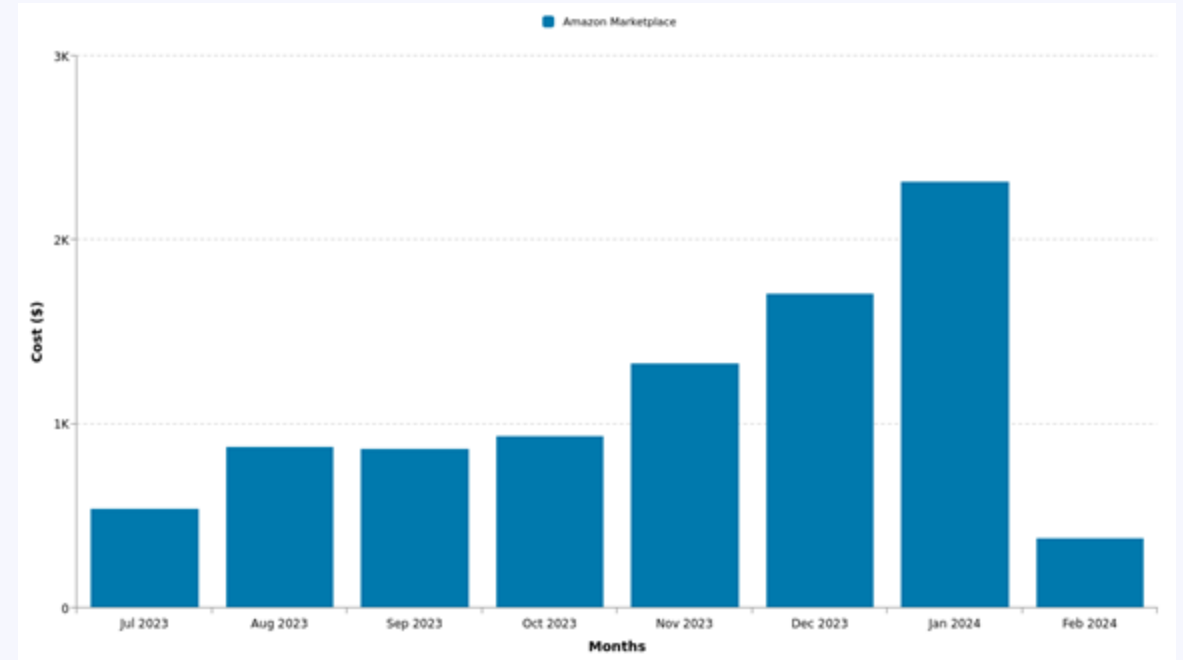
Notable Spend Trends

Amazon Marketplace Increases (ElasticSearch related)

OpenSearch Spend Trend



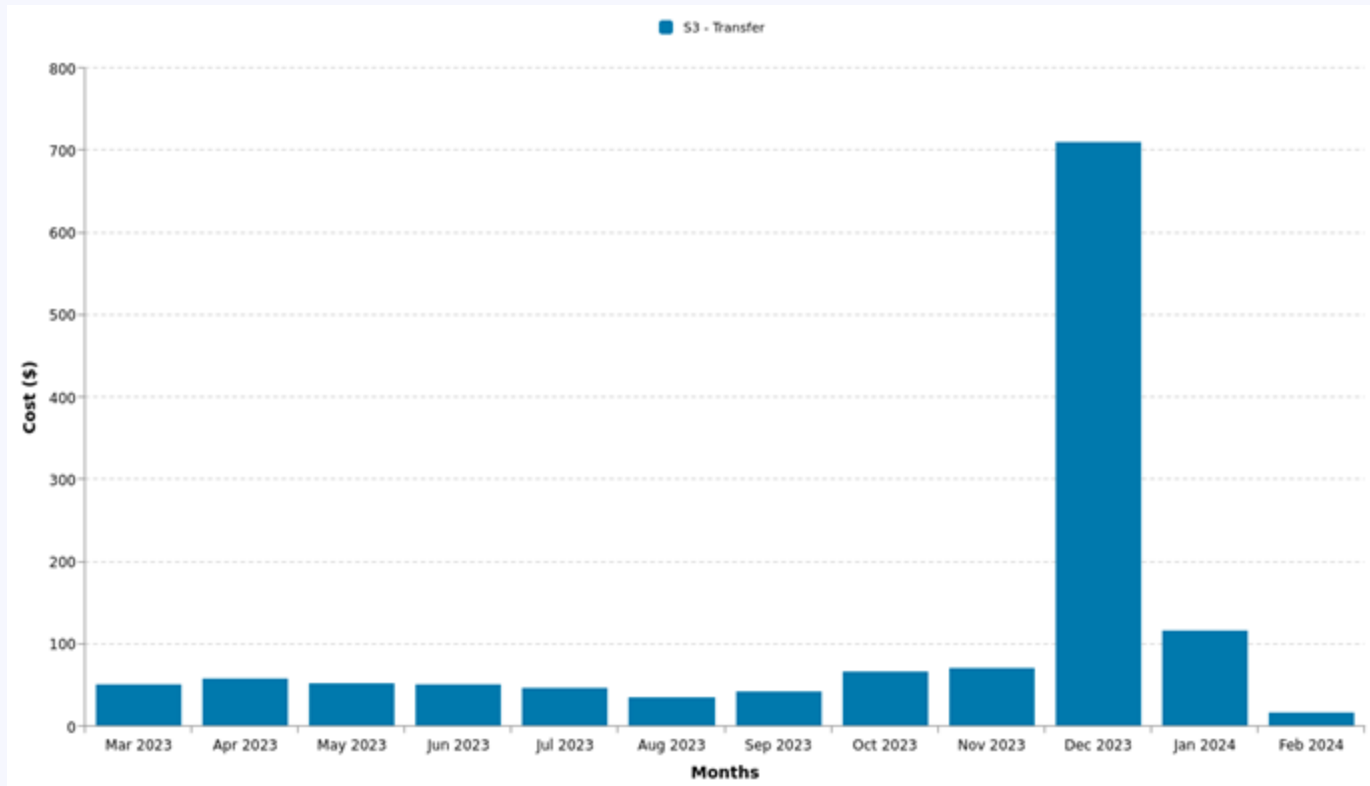
Marketplace (Elasticsearch) Spend Trend



RecordType	ProductName	UsageType	Operation	ItemDescription	ResourceId	UsageStartDate	Cost
LineItem	Elastic Cloud (Elasticsearch Service)	MP:es_service_usage-Units	Usage	AWS Marketplace software usage/us-east-1Elastic Consumption Unit		2024-01-01 00:00:00	\$2,311.72

Notable Spend Trends

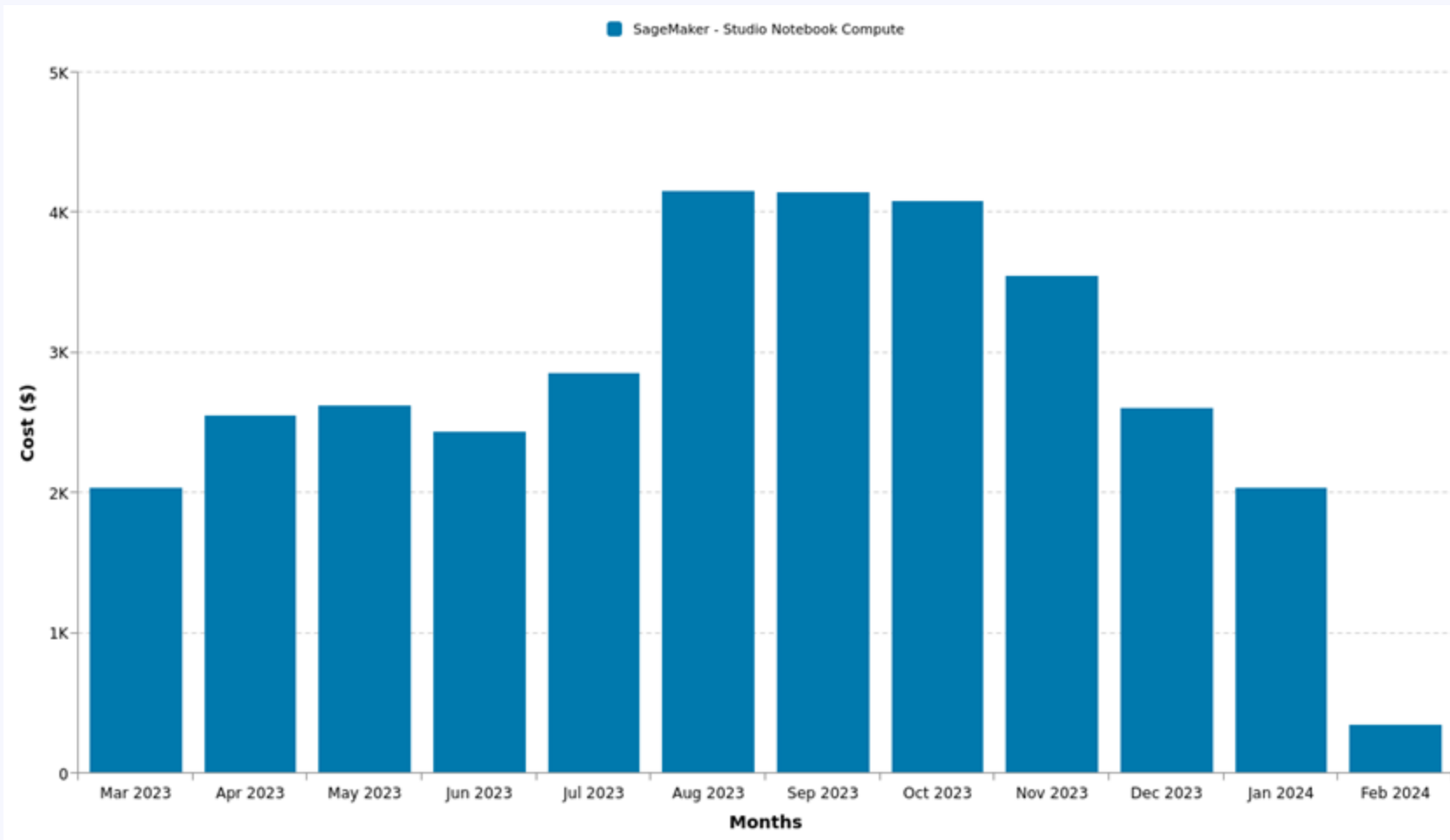
S3 - Transfer Increases



RecordType	ProductName	UsageType	Operation	ItemDescription	ResourceId	UsageStartDate	Cost
LineItem	Amazon Simple Storage Service	DataTransfer-Out-Bytes	GetObject	\$0.090 per GB - first 10 TB / month data transfer out beyond the global free tier	ivol-marketdata	2023-12-01 00:00:00	\$665.83

Notable Spend Trends

SageMaker Decreases



[Cost History Report](#)



Prior Month Cost Anomaly Analysis

Metric	Count
Count of Anomalous Spikes:	8
FinOps Tickets Opened:	0
Client Tickets Resolved:	0

Methodology: Spend Anomalies are analyzed daily by our FinOps Team based on the following assumptions:

- › Employing CloudHealth's machine learning/artificial intelligence Anomaly Detection module.
- › Omitting spikes related to Marketplace, and single entry items such as Support, Prepaid CBD, and WorkSpaces.
- › Filtering for Cost Impacts above \$30/day.
- › Reviewing prior 90 days spend by service to expand analysis and determine true anomalies.



Rate Savings Estate Summary



Service	EC2 Reserved Instances	EC2 Savings Plans	RDS Reserved Instances	ElastiCache Reserved Instances	Redshift Reserved Instances	OpenSearch Reserved Instances
Existing Items:	None	None	None	None	None	None
Expiring in the Next 60 Days:	N/A	N/A	N/A	N/A	N/A	N/A
Proposed Items:	None	See Slide 15	See Slide 20	None	See Slide 24	None





Potential Monthly Savings Agenda

Savings Opportunity	Potential Monthly Savings
EC2 - Rightsizing	\$25,272
EC2 - Commitment Based Discounts	\$9,441
EBS - GP2 to GP3 Migration	\$2,725
EBS - Unattached Storage	\$14
RDS - Idle Instances	\$105
RDS - Reservations	\$239
Redshift - Reservations	\$474
WorkSpaces - Rightsizing	\$5,810
Total:	\$44,080



RDS Idle Instance

(<1 Average DB Connection) Recommendations

RDS Idle Instance Summary:

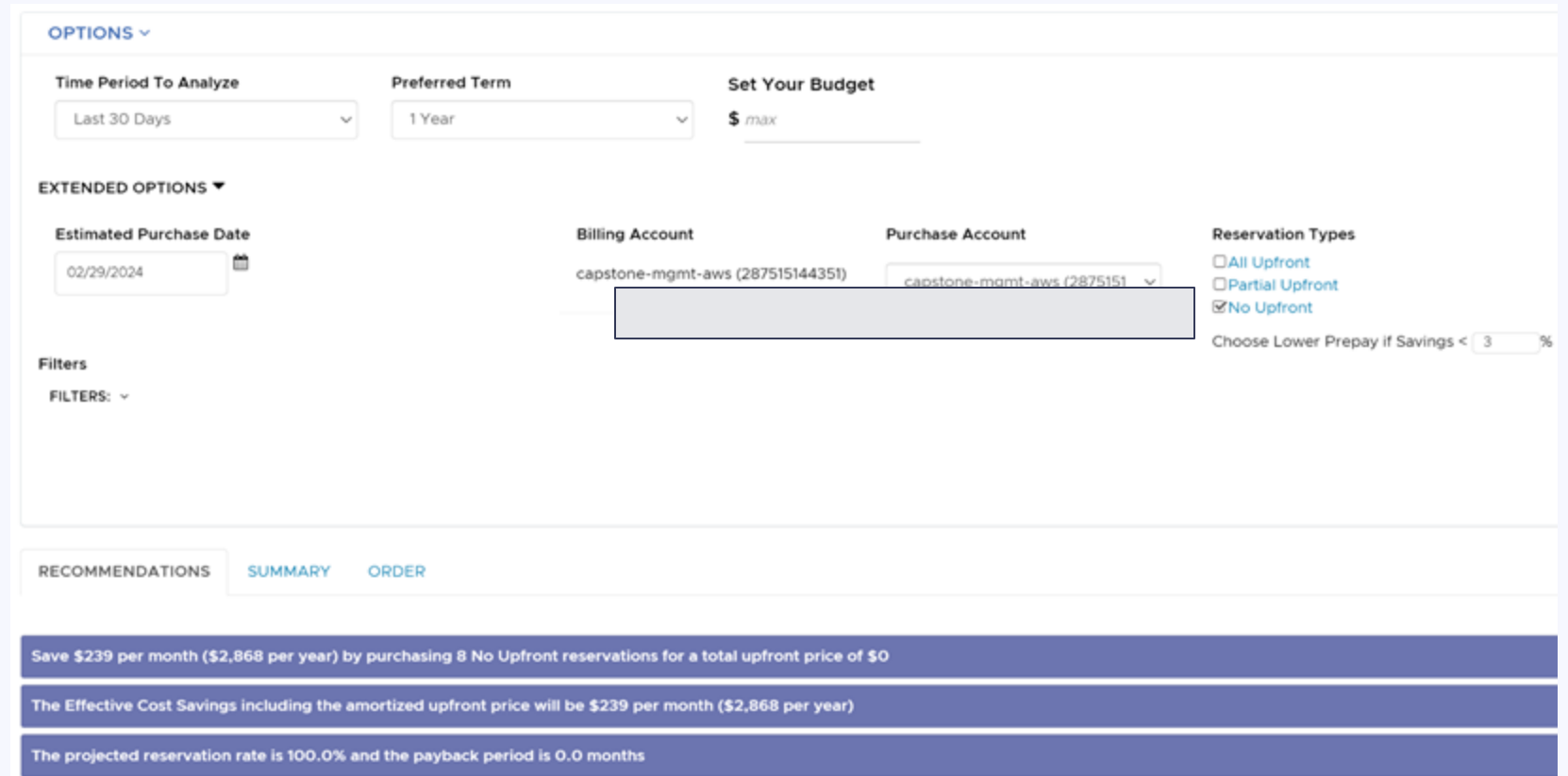
- > Count of Idle Instances: 4
- > Potential Monthly Savings: \$105
- > RDS Idle Instances Report: [Link](#)

Instance Id	Month	DB Name	Size (GB)	Flavor	Engine	Version	List Price Per Month	Avg Database Connections ^	Avg CPU Utilization	Current Reservation %
post-dev-npa	2024-01-01		20	db.t3.small	postgres	13.10	\$26.27	0.0	4.952	0.0
post-dev-procure	2024-01-01		20	db.t3.small	postgres	13.10	\$26.27	0.0	5.03	0.0
post-prod-npa	2024-01-01		20	db.t3.small	postgres	13.10	\$26.27	0.0	4.979	0.0
post-prod-procure	2024-01-01		20	db.t3.small	postgres	13.10	\$26.27	0.0	4.824	0.0

RDS Reserved Instance Recommendations

RDS Rate Savings Estate:

- > Prior Month RI Coverage: 0%
- > Proposed RI Purchase Count: 8
- > No Upfront 1 Year Reservations
- > Potential Monthly Savings: \$239



The screenshot displays the 'OPTIONS' section of the RDS Reserved Instance Recommendations tool. It includes the following fields and settings:

- Time Period To Analyze:** Last 30 Days
- Preferred Term:** 1 Year
- Set Your Budget:** \$ max
- EXTENDED OPTIONS:**
 - Estimated Purchase Date:** 02/29/2024
 - Billing Account:** capstone-mgmt-aws (287515144351)
 - Purchase Account:** capstone-mgmt-aws (2875151)
 - Reservation Types:**
 - All Upfront
 - Partial Upfront
 - No Upfront
 - Choose Lower Prepay if Savings <:** 3 %
- Filters:** FILTERS: ▾

At the bottom, there are three tabs: RECOMMENDATIONS, SUMMARY, and ORDER. Below the tabs, three summary bars provide key information:

- Save \$239 per month (\$2,868 per year) by purchasing 8 No Upfront reservations for a total upfront price of \$0
- The Effective Cost Savings including the amortized upfront price will be \$239 per month (\$2,868 per year)
- The projected reservation rate is 100.0% and the payback period is 0.0 months

[Assets - Active Reservations](#)

Thank You

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